

Abstract of the Invention

A method of securing an acetabular cup to an acetabulum so as to provide a bearing surface for a head portion of a femur includes the step of reaming a hemispherically-shaped cavity having a first radius into the acetabulum with a reamer. The reamer includes a hemispherically-shaped cutting head which possesses the first radius. The method also includes the step of press fitting the acetabular cup into the cavity reamed into the acetabulum. The acetabular cup includes a cup body having a substantially constant radius sidewall which extends outwardly from an apex to an annular rim. The sidewall defines an imaginary hemisphere having a second radius. The second radius is greater than the first radius. An outer face of the annular rim of the cup body defines a segmental plane which intersects the imaginary hemisphere. The segmental plane is parallel to a great circle of the imaginary hemisphere. The segmental plane is separated from the great circle of the imaginary hemisphere by a distance D in which $0.5 \text{ millimeters} \leq D \leq 2.0 \text{ millimeters}$. A prosthetic hip assembly for replacing a natural bearing surface of an acetabulum with an artificial bearing surface for a head portion of a femur is also disclosed.